

ANDERSEN AIR FORCE BASE, NORTHWEST FIELD  
Ritidian Point, Northwestern End of Island Guam  
Yigo  
Guam County  
Guam

HAER GU-5  
*GU-5*

PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

FIELD RECORDS

HISTORIC AMERICAN ENGINEERING RECORD  
National Park Service  
U.S. Department of the Interior  
1849 C Street NW  
Washington, DC 20240-0001

**HISTORIC AMERICAN ENGINEERING RECORD**  
**ANDERSON AIR FORCE BASE, NORTHWEST FIELD**

HAER No. GU-05

Location: Northwestern extremity of Guam and Andersen Air Force Base on Ritidian Point

Date of Construction: January to July 1945

Fabricator: U.S. Army Engineers and U.S. Navy Construction Battalion

Present Owner: U.S. Air Force, Andersen Air Force Base

Present Use: Military training exercises

Significance: Northwest Field is significant under criteria A at a national level for events during World War II that aided in the defeat of Japan and the ending of the war. The property's significance is tied to its dedicated use for night missions against the Japanese oil industry, for its having the only bombers especially equipped with the AN/APQ-7 "Eagle" radar, for the 315th Bomb Wing development of the "compressibility" procedure, and for its planes flying the last bombing mission against Japan.

Historians: D. Jayne Aaron, Architectural Historian, engineering-environmental Management, Inc. (e<sup>2</sup>M), 2007  
Daniel Hart, Historic Archeologist, e<sup>2</sup>M, 2007  
S. Chris Baker, Historian, e<sup>2</sup>M, 2007

Project Information:

In 1984, Edwin N. Thompson, historian for the National Park Service, submitted a National Register of Historic Places

nomination form for Northwest Field. At that time, the boundaries of the historic property were drawn to include the two runways and main taxiways, and all the service aprons located at Northwest Field. A second form was submitted in 1986, with new boundaries that included only the two runways and intervening area between them. This form reduced the size of the historic property by approximately 75 percent. In 1990, the Advisory Council on Historic Preservation, the Guam Historic Preservation Office, and the U.S. Navy (USN), with the U.S. Air Force (USAF) and the War in the Pacific National Historical Park (National Park Service) as concurring parties, signed a memorandum of agreement (MOA) for the Historic Preservation in Conjunction with Relocatable Over-the-Horizon Radar Project P-223. The MOA stipulated that the boundaries of the Northwest Field historic property again be reassessed.

In 1991, Dr. Paul H. Rosendahl recommended that the boundaries be expanded "to more accurately represent the true boundaries of Northwest Field and all associated features."

*It is recommended that the boundaries begin at a point approximately one kilometer north and west of Potts Junction on Route 3 and follow Route 3 to a point where the road turns almost due north. The boundary should then proceed in a northeasterly direction following a narrow road to the point where this road intersects with a narrow road that runs in a southeasterly direction.*

*Then follow this road to another intersection with a narrow road running in a southwesterly direction to intersect the northeast end of the northern taxiway. The boundary should then follow the northeast edge of the northeastern taxiway to the northwestern edge of the northern runway and continue around the outer edge of the runway to the outer edge of the service apron between the northern and southern runways. Then follow the service apron in a southwesterly direction to the southern edge of the southern runway and proceed southeast, following an overgrown service apron and taxiway, approximately 1400 meters (m) to intersect with an overgrown road running in a southwesterly direction, follow this road approximately 1500 m to intersect the first southeast-trending road. At this point, the boundary would follow the southeast-trending road approximately 750 m to the end of the*

*road and proceed southwest approximately 500 m to the point of beginning.*

*These new boundaries would include the main runways; all taxiways, service aprons, and hardstands; and most of the residential and service-group facilities associated with Northwest Field.<sup>1</sup>*

The boundaries were not officially changed to reflect these recommendations due to the cancellation of the Relocatable Over-the-Horizon Radar Project P-223. In 1997, Richard K. Olmo prepared a National Register of Historic Places nomination form with the boundaries described as "The northwest corner is located north of a small borrow-pit and just east of route 3, then northeast in a straight line to Az 62.5° for a distance of 3256 m to the northeast corner; then due south a distance of 1153.8 m to the southeast corner; then, southwest in a straight line on Az 243.5° for 3256 m to the southwest corner; and finally due north a distance of 1153.8 m back to the northwest corner." The justification for this boundary was cited as "Considering that the runway, taxiways, hard stands, and service aprons were completed well before the support facilities, and that they were permanent structures while most of the support buildings were temporary, only these are recommended for the register. They were the minimum facilities required for the planes to conduct their mission."

This Historic American Engineering Record (HAER) documentation acknowledges and documents the recommended expanded boundaries. However, typhoons in 1957 and 1962 obliterated the buildings and structures, so the physical remains to be documented are runways, taxiways, and service aprons.

In 2001, the Quadrennial Defense Review directed the USAF to expand basing in the Pacific region with a military force that is regionally tailored to be multifaceted and capable of responding quickly to any situation. As a result, the USAF proposed the location of the RED HORSE Squadron, its Silver Flag unit, the Commando Warrior training program, and the Combat Communications Squadron and its training program to Northwest Field. The lead agency for this undertaking is the Department of the Air Force, Headquarters, Pacific Air Forces, Hickam Air

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<sup>1</sup> Rosendahl, Paul H. PhD, Alan E. Haun, PhD, and Bradley J. Dili. 1991. Summary of Historic Preservation Mitigation Efforts for the Relocatable-Over-the-Horizon Radar Projects at Northwest Field, Guam, and North Field, Tinian; United States Navy, September 1991.

Force Base, Hawaii.<sup>2</sup> In anticipation of adverse effects to Northwest Field, the USAF and Guam Historic Preservation Office negotiated a new MOA regarding the Northwest Field Beddown Initiatives at Andersen Air Force Base, Guam, which was signed in October 2006. The MOA again stipulated HAER documentation for mitigation for adverse effects to the historic property.

The 2006 MOA for and subsequent negotiation with the Guam Historic Preservation Office resulted in the following agreed upon HAER package:

Drawings (minimum of four drawings):

- Map of the original runway complex as it existed in 1945.
- Map of the runway complex as it exists today.
- Maps or illustrations of other unique or important features of the runway complex.
- These maps shall be photographed in 8" x 10" negative formats, and reproduced as photographs.

Photographic images in 4" x 5" formats shall include (minimum of ten):

- current exterior views
- historic views, if available

Photographic images in 8" x 10" formats shall include (minimum of three):

- historic aerial views, if available
- current aerial view

Written data (history and description):

- Document the development of engineering principles, innovations and technologies, and implemented processes. The focal point of the report shall be the engineering and/or technological history of the site.
- Explain the significant aspects of the site.

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<sup>2</sup> Geo-Marine, 2006, Results of Cultural Resources Inventories for Establishment and Operation of an Intelligence, Surveillance, Reconnaissance, and Strike Capability and the Deployment of RED HORSE Squadron, Andersen Air Force Base, Guam. Geo-Marine, Las Vegas, Nevada, iii.

Themes that should be explored include:

- construction of the runway complex, politically and physically
- the B-29
- events of World War II (WWII) strategic bombing and fire bombing of Japanese cities during WWII
- the 315th Bomb Wing (BW)
- post-WWII through 1949

Research was conducted in the winter of 2006-07 at Andersen Air Force Base, Environmental Office; Andersen Air Force Base, Historian's Office; Andersen Air Force Base, Northwest Field; Guam Historic Preservation Office; University of Guam, Robert F. Kennedy Library; Micronesian Area Research Center; National Park Service Office for War of the Pacific National Historic Park; and the National Archives and Records Administration (NARA), College Park, Maryland. Contact was made with Maxwell Air Force Base, Air Force Historical Research Agency, Alabama; NARA, San Francisco, California; Naval Sea Systems Command (NAVSEA) Port Hueneme, Port Hueneme, California; and the Bishop Museum, Honolulu, Hawaii.

Northwest Field closed in 1949. When Northwest Field was constructed, it was a separate airfield and not a part of the air force base that is now Andersen. Guam has sustained numerous typhoons that have destroyed buildings, structures, and archives. All of these factors have resulted in the location of minimal historic photography and research materials. Therefore, the documentation team created drawings to illustrate the minimal imagery that has been located in repositories. This documentation package includes:

The written report focusing on the significant aspects of the site, which is organized as follows:

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▪ Seven Drawings	
- The War in the Pacific - depicting the rise and fall of Japanese power from 1941-45	
- The B-29 Bomber - depicting images and specifications of the B-29	
- B-29 Airfield in the Pacific - depicting the strategic plans against Japan	
- Northwest Field - depicting early living conditions / map of the runway complex as it exists today	
- Northwest Field - depicting the location, plans, and early aerial images	
- 315th BW Offensive Against Japan - depicting the bombing missions on the Japanese mainland	
- The Last Mission - depicting the last bombing mission of WWII	
▪ Twelve photographic images in 4" x 5" format including current views of the runways, taxiways, hardstands, service areas, and Quonset pad	

- Photographic images in 8" x 10" format shall include (minimum of 3):
  - Historic aerial views, only one image located is of adequate quality to reproduce in 8" x 10" format.
  - Current aerial view



## INTRODUCTION

The U.S. Territory of Guam is the southernmost and largest of the islands within the Mariana Islands archipelago. Guam is approximately 3,600 miles west-southwest of Hawaii, and 1,550 miles southeast of Japan. Andersen Air Force Base is situated at the northern extremity of Guam; and Northwest Field lies at the northwestern extremity of Andersen Air Force Base at Ritidian Point. Northern Guam is a relatively flat elevated limestone plateau having an elevation of approximately 152 meters (m) (500') above sea level.

Soon after Guam was liberated by the United States from Japan in August 1944, U.S. Army engineers and USN construction battalions began construction of two airfields, North and Northwest, in the island jungles. The fields were designed for the mighty B-29 bomber for operations against Japan.

Northwest Field comprised two parallel runways constructed in a southwest to northeast direction. The main runway in the north measures 3,000 m (9,842') in length and 40 m (131') in width. The second smaller runway to the south measures 2,400 m (787') in length by 30 m (98.4') wide. The runways were approximately 300 m (984') apart. Numerous taxiways and aircraft parking areas paralleled the runways to the northeast and southwest sides of the runways. Beyond the taxiways were the hardstands and parking areas. The runway, taxiways, parking areas, and a few of the hardstands are macadamized on a coral-limestone base. To the northeast and southwest of the hardstands and parking areas were the service aprons, flanked by temporary structures, primarily Quonset huts used for housing, mess, offices, communications, medical, and recreation. Most of the hardstands and all of the vehicular roads were cleared and not revetted.

In 1949, Northwest Field was essentially abandoned. From the end of WWII to the year 2000, maintenance activities at Northwest Field were limited to repairs to the south runway and to its east and west taxiways. A series of typhoons in the 1950s and 1960s destroyed structures.

Today, Northwest Field is used for troop and aircraft touch-and-go exercises, and the Detachment 5, 22nd Space Operations Squadron facility occupies a small area on what was the south aircraft parking area. Local weather, flora, and changes in military mission have, respectively, reclaimed and led to the dismantling of much of the former air base. There are no extant

buildings or structures except for deteriorating runways, hardstands, and some road traces. The area is also used for hunting feral pigs and deer. Nonetheless, the airfield had a brief yet dynamic history associated with WWII missions. In fact, the very existence of Northwest Field is tied to strategic planning in the campaign against Japan. The bombardment of Japan raised the question of whether strategic bombing alone could win a war. It also became one of the most controversial campaigns in the war because it involved the one and only time atomic weapons were used during wartime.<sup>3</sup>

The following historic context is divided into six sections. The first three sections provide brief discussions of the development of the B-29 Bomber and XXI Bomber Command, the U.S. campaign in the Mariana Islands, and air base construction in the Mariana Islands and Guam. These sections summarize the key events leading up to and set the scene for the next sections, including the construction of Northwest Field and the missions of the 315th BW. The context concludes with a brief summary of events at Northwest Field after WWII and after the period of significance for the historic property.

## **B-29 Bomber Program**

### ***General Development***

On 5 May 1939, the Kilner-Lindbergh Board was formed to investigate the readiness and future needs of the U.S. Army Air Force (USAAF). The board, composed of Charles A. Lindbergh, General W. C. Kilner, Colonel Carl A. Spaatz, and Colonel Earl L. Naiden made a number of recommendations, some of which addressed the need for a very long-range bomber. As a result, Major General Henry H. (Hap) Arnold, Chief of the Air Corps, USAAF, began investigating the applications for a very long-range, very heavy bomber for future air power needs.<sup>4</sup> By 1940-41, it appeared that England would likely fall to Germany and the United States would have no forward location to launch strikes against Germany. This added immediacy to the need for long-range air power as a key to victory against Axis powers.<sup>5</sup>

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<sup>3</sup> Haulman, Daniel. L. 1999. *The U.S. Army Air Forces in World War II: Hitting Home, The Air Offensive Against Japan*. Washington, D.C.: Air Force History and Museums Program, Introduction.

<sup>4</sup> Coox, Alvin D. 1998, "Strategic Bombardment in the Pacific" in *Case Studies in Strategic Bombardment*. R. Cargill Hall, editor. Washington, D.C.: Air Force History and Museum Program, 266.

<sup>5</sup> Huston, John W. Ed. 2002. *American Air Power Comes of Age: General Henry "Hap" Arnold's World War II Diaries*. Volume I. Maxwell Air Force Base, AL: Air University Press, 46.

The aircraft requirements included speeds over 400 miles per hour (mph), a range of over 5,333 miles, and ability to carry a 1-ton bomb and a bomb load of 20,000 pounds over half that distance. Of the four models entered in the competition, only the Boeing B-29 "Superfortress" and the Consolidated B-32 "Dominator" would reach production and testing. Boeing's aircraft was selected as the primary recipient of the award due to various technological innovations, but the conservatively designed B-32 was also produced in case the radically different B-29 was a failure.<sup>6</sup>

Everything about the aircraft was innovative and massive. The B-29 had a wing span of 141' and 3" and a length of 99'. The B-29 comprised a large, aerodynamic airframe powered by four Wright Cyclone R-3350 engines, the most powerful aircraft engines built to date, which could propel the aircraft at over 350 mph. Aircraft defenses included five enclosed, remote-controlled defensive armament positions, four with twin .50 caliber machine guns and a tail turret with four .50 caliber machine guns that were controlled by a specially developed General Electric fire control system. A high aspect ratio wing was designed for improved long-range cruising characteristics. A larger Fowler flap permitted takeoff and landing at lower speeds and shorter distances, similar to the B-17 and B-24 bombers.<sup>7</sup> The ten-man crew had the luxury of pressurized cabins during cruising, which were then depressurized during combat operations so sudden decompression wouldn't occur if the cabin was punctured by hostile fire.<sup>8</sup> The B-29 was able to operate at altitudes between 25,000' to 30,000', which were well above effective fighter/interceptor and antiaircraft altitudes. At its completion and deployment, the B-29 was the largest, most sophisticated bomber in the world.

The capabilities of the B-29 completely changed the strategy used against Japan during WWII. An intensive bombing campaign was conceived using the Superfortress, which could reach Japan from forward positions in Guam, Tinian, Okinawa, and Saipan. The hope was that this campaign would cause Japan to surrender and avert a costly mainland invasion.

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<sup>6</sup> Lloyd, Alwyn T. 2000. *A Cold War Legacy: A Tribute to Strategic Air Command 1946-1992*. Pictorial Histories Publishing Company, Missoula, MT, 31.

<sup>7</sup> Ibid.

<sup>8</sup> Coox, *Strategic Bombardment in the Pacific*, 16.

The B-29 bomber carried out the longest bombing missions on record during WWII and was also the first aircraft to carry and deliver nuclear weapons. Additionally, it was the sole aircraft of Strategic Air Command until 1954, when other aircraft replaced the B-29. At the end of WWII, 3,960 B-29s were in service at a cost of \$639,188 per plane.<sup>9</sup>

### ***Establishment of XXI Bomber Command***

Once the B-29 aircraft was developed, concerns about the effective combat utilization of the B-29 were raised by USAAF commanders, and as a result, an entirely new organization in the air force was created. Air Force commanders worried that theater commanders would waste the aircraft on the battlefield in Asia and the Pacific merely as support for tactical surface operations and that they lacked a clear appreciation of the value of strategic bombing against the Japanese home islands.

To avoid this "misuse," Brigadier General Haywood S. Hansell (USAAF), one of General Hap Arnold's planners, proposed to the Joint Chiefs of Staff that strategic air forces in the Pacific be consolidated under one command. The Joint Chiefs saw the value of this strategy and quickly agreed. In April 1944, the Twentieth Air Force was established to utilize the B-29s. The XXI Bomber Command was a component of the Twentieth Air Force. General Arnold became commander of the Twentieth Air Force, and Brigadier General Hansell served as chief of staff. Centralized control of the Superfortresses from Washington, D.C., marked the recognition of the B-29 as a strategic weapon that transcended theaters and services.<sup>10</sup>

Huge logistical problems were encountered in ferrying fuel and supplies over the Himalayas, the world's highest mountain range. For every B-29 mission flown against Japan, six had to be flown to get supplies to the necessary bases. This prevented the possibility of a sustained bombing campaign from China. Range to the targets from China was also a problem, as were technical problems stemming from frequent cloud cover and aircraft maintenance. These initial logistical and deployment problems from the China-Burma-India theater encountered by the B-29 XXI Bomber Command caused consternation as far up the chain of command as President Roosevelt.<sup>11</sup> Because of the various problems

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<sup>9</sup> Knaack, Marcelle Size. 1988. *Encyclopedia of U.S. Air Force Aircraft and Missile Systems* (Volume II) Post World War II Bombers 1945-1973. Washington, D.C.: Office of Air Force History, 17.

<sup>10</sup> Haulman. *The U.S. Army Air Forces in World War II*, 15.

<sup>11</sup> Coox, *Strategic Bombardment in the Pacific*, 16.

experienced in the China-Burma-India theatre, the XX Bomber Command operations were transferred to the already-functioning XXI Bomber Command in the Mariana Islands in early 1945. The bases in the Marianas provided defensible, easily supplied airfields capable of sustaining hundreds of B-29 Superfortresses at one time.<sup>12</sup> The USN was already in control of regional shipping channels and could ship and stockpile thousands of pounds of bombs for the bombing offensive.

There were eventually a total of five XXI Bomber Command B-29 airfields and one XXI Bomber Command supply depot field in the Marianas. These included Guam's North (314th BW), Northwest (315th BW) and Depot fields, Tinian's North and West fields (313th BW), and Saipan's Isley Field (73rd BW) (see section below for a discussion of the capture of Guam and the development of the airfields on the island).

General Curtis LeMay, USAAF, was transferred from the failing XX Bomber Command in January 1945 to take command of the XXI Bomber Command in the Mariana Islands. General LeMay benefited from implementing more training for crews and receiving better-quality aircraft. He implemented more crew training and began experimenting with incendiary bombs, which soon proved their effectiveness against the predominantly wooden architecture of the Far East.

Incendiary bombing raids were used to supplement daytime high altitude (25,000' to 30,000') raids. Low-level nighttime incendiary bombing was carried out from between 5,000' and 10,000', which allowed fuel savings because aircraft would not have to expend fuel to climb to high altitudes and then fly against the jet stream to the target. This meant more munitions could be carried, and because they were flying below cloud cover, improved accuracy would wreak even more destruction on Japan's industries and cities.<sup>13</sup>

These factors, along with new B-29 bombing tactics developed by General LeMay and others, assisted in turning the tide against the Japanese and resulted in a devastating sustained bombing campaign that crippled the Japanese home islands.<sup>14</sup>

In May 1945, General LeMay embarked on an "Empire Plan," that allowed weather conditions to determine if the bombing raids

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<sup>12</sup> Haulman, *The U.S. Army Air Forces in World War II*, 15.

<sup>13</sup> Haulman, *The U.S. Army Air Forces in World War II*, 15.

<sup>14</sup> Ibid.

would be precision or area strikes. The B-29s flew precision daylight missions in good weather and night incendiary raids when targets were obscured by clouds. Incendiary bombing continued to produce the most destructive results. In May and June 1945, the XXI Bomber Command firebombed Japan's six largest industrial cities, eliminating them as profitable targets.<sup>15</sup>

The B-29 proved to be an important and substantially used aircraft, not only for the XXI Bomber Command, but for the entire Twentieth Air Force. By August, the Twentieth Air Force had conducted 380 combat missions against Japan. Superfortresses released 147,000 tons of bombs—91 percent of all bombs dropped on Japan's home islands. The B-29 attacks destroyed half of the enemy's aircraft plant capacity and likely cost the Japanese 7,000 combat planes in lost production. In the process, the Twentieth Air Force lost 512 B-29s and 576 aircrew members. By August 1945, more than 2,000 crew members were missing in action, but in the last month of the war, when the Twentieth Air Force had over 1,000 B-29s in the Pacific, only four Superfortresses were lost.<sup>16</sup>

Intelligence estimated that 175 square miles of urban area in 66 cities were destroyed. Total civilian casualties stemming directly from the urban attacks were estimated at 330,000 killed, 476,000 injured, and 9,200,000 rendered homeless (50 percent of the 1940 population of the cities).<sup>17</sup>

*The bombing offensive was the major factor which secured agreement to unconditional surrender without an invasion of the home islands—an invasion that would cost hundreds of thousands of American lives. The demonstrated strength of the U.S. B-29 attacks contrasted with Japan's lack of adequate defense made clear to the Japanese people and to the government the futility of further resistance. . . . It seems clear that, even without the atomic bombing attacks, air supremacy over Japan could have exerted sufficient pressure to bring about unconditional surrender and obviate the need for invasion (Postwar U.S. Strategic Bombing Survey).*<sup>18</sup>

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<sup>15</sup> Ibid.

<sup>16</sup> Haulman, *The U.S Army Air Forces in World War II*, 15.

<sup>17</sup> Craven, Wesley Frank and James Lee Cate. Eds. [1953] 1983. *The Pacific: Matterhorn to Nagasaki, June 1944 to August 1945*. Volume 5 of *The Army Air Forces in World War II*. Reprint. Chicago IL: University of Chicago Press, 754.

<sup>18</sup> Craven, Cate, *The Pacific: Matterhorn to Nagasaki, June 1944 to August 1945*, 23.

### ***B-29 Specialization for the 315th Bomb Wing (Very Heavy)***

The aircraft of the 315th BW had various special modifications made for their night bombing missions of Japan's oil industry. The unique mission, equipment, and aircraft modifications are what defined the 315th BW.

The 315th BW predominantly flew the B-29B, although in a few cases they did fly other B-29 models. The wing initially flew the original B-29 until the B-29B model was delivered to the wing. The original bombers were stripped of all armament, except the tail gun because they were exclusively a night bombing wing and did not require all of the heavy defensive armament. The B-29B model was manufactured without the heavy defensive guns and sighting apparatus.

The most significant modification to the B-29Bs of the 315th BW was the incorporation of the AN/APQ-7 "Eagle" radar. Previous radar sets used in so-called "blind bombing" presented a 360 degree scan on the scope. Definition thus obtained was, at best uncertain. With the APQ-7, the beam was narrowed so that a 60 degree sector was presented on the scope, and the return obtained was far superior in definition. An antenna constructed in the form of a wing was attached to the underside of an aircraft. The Eagle radar system was the most advanced radar system in the world and, in part, determined the B-29 bombing strategy. Its unique qualities would eventually be used and mastered by the 315th BW, which was the only bomb wing to use the Eagle radar.<sup>19</sup> The Eagle radar could be used in the dark and could penetrate cloud cover, which allowed bombing despite darkness, clouds, or inclement weather. For these reasons, it was outfitted in the aircraft of the 315th BW for the mission tasked to them, which was to disable and destroy Japan's oil manufacturing industry. The oil refineries were situated almost entirely along the coastline. The naturally occurring cloud cover that perpetually enveloped the area provided a natural defense against aerial bombardment.<sup>20</sup> Unknown to the Japanese, the Eagle radar stripped them of the slim advantage afforded against bombardment and spelled the demise of Japan's oil industry and the eventual unconditional surrender of Japan. This

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<sup>19</sup> USAAF, 1945i. Historical Data, Narrative History Documents of 315th Bombardment Wing, XXI Bomber Command, 20th Air Force, Period: 1 July 1945 to 2 September 1945, 46-51.

<sup>20</sup> Swann, Ralph L, 1986. *A Unit History of the 315th Bomb Wing: 1944-1946*. Air Command and Staff Collection, Maxwell AFB, 41.

was the first time radar bombing without any visual contact with the target had been tried in combat.<sup>21</sup>

The radar scanning mechanism consisted of a series of pre-aimed transmitter segments mounted on a small wing under the fuselage between the bomb bays. The segments were sequentially activated from the middle of the wing and moved outward to the tip and then back to the center, providing a 35 degree sweep to each side of the flight path. The target azimuth provided was .4 degrees. This was three to six times smaller than that of the APQ-23 and APQ-13 radar systems used by other B-29 wings, providing exceedingly better resolution. The information from the transmitter segments was transmitted as a V-shaped image to an oscilloscope, as opposed to the round picture provided by traditional radar. Any object in the path of the transmitter's beam appeared as a blip on the oscilloscope screen. The bombsight was then synchronized between the radar reading and bombardier's calculations. However, the radar did not always work as expected. The radar wing had to be pressurized at the same pressure as the cabin. If there were any deviation to this, the radar would begin to malfunction. Sometimes it might give two right sweeps or left sweeps, or it would provide an upside down picture or no picture at all.<sup>22</sup>

Despite the quirks of the Eagle radar, it was the best radar system conceived to date and the personnel were the best trained anywhere. The following factors accounted for the success of the Eagle radar system: (1) the target azimuth resolution was the best available; (2) the 315th BW had a dedicated operational aim, which was to do radar bombing and radar bombing only (no mixed visual/radar training was ever seriously contemplated for the wing) unless the radar malfunctioned; (3) the radar bomb aimers went through the most extensive training program of any bomb wing in the XXI Bomber Command and the USAAF; and (4) the Eagle radar operating procedures were the simplest ever used in a combat radar bombing program (the APQ-13 and APQ-23 systems were much too complicated for easy use). The statistics compiled by the wing demonstrated that during combat missions in August, the Eagle radar system was approximately 95 percent accurate with adequate training.<sup>23</sup>

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<sup>21</sup> USAAF, 1945i, *Narrative History Documents of 315th Bombardment Wing, XXI Bomber Command*, 25.

<sup>22</sup> Griffin, Robert F., 1987. *A Collection of Stories by Robert F. Griffin, 331st Bomb Group* in *Anthologies of the 315th Bomb Wing (VH) XXI Bomber Command, 20th Air Force, Northwest Field, Guam WWII, Volume 1*. Byron Kennedy and Company, St. Petersburg, Florida, 23.

<sup>23</sup> USAAF, 1945i, *Narrative History Documents of 315th Bombardment Wing, XXI Bomber Command*, 46.



The other major modification to the 315th BW aircraft was the AN/APG-15 radar, which was used to aim the tail turret guns. The radar unit appeared as a ball on the turret.

## **Mariana Islands Campaign**

### ***Overview of the Mariana Islands Campaign***

The anticipated use of the B-29 Superfortress in the Pacific influenced the plans of the Joint Chiefs of Staff in Washington, D.C., in the war with Japan. When ready for combat in late 1943 and early 1944, this new weapon provided a 1,600 mile effective offensive bombing range. At this time, no islands close enough to Japan had been taken or retaken by Allied forces, which would have allowed the B-29 to strike at the heart of Japan.

On 6 April 1944, the Joint Chiefs' planners recommended the development of Very Heavy Bomber (VHB) bases on the Marianas, including Guam. It was believed that the Marianas would be under U.S. control by summer. The planners estimated that Guam, Tinian, and Saipan could all be developed for use as VHB bases. The B-29s could reach the main Japanese cities and industries from the Marianas. However, initially the Marianas would only be a stepping stone to the island of Formosa, which was much closer, and would be an even more effective staging area for VHB bases. On 10 April 1944, the Joint Chiefs approved the deployment of twelve bomb groups to the Marianas with the provision they would be moved to Formosa when that island came under Allied control.<sup>24</sup>

Admiral Chester W. Nimitz, USN, devised the "island hopping" strategy in order to capture or recapture strategic far-flung central Pacific islands from the Japanese. This campaign provided an avenue for the establishment of supply and operations outposts for both the USN and USAAF. The operation bypassed heavily fortified Japanese strongholds and, instead, focused on the capture of strategically important islands that could be used as bases in reaching the Japanese home islands. This strategy was unique in many ways, and became a model example of how land, sea, and air power could work together to secure military objectives. Securing these islands allowed the

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<sup>24</sup> Hubbell, James H., Historical Editor and Edward A. Chalfant, Historical Specialist, 1945a The Air War in the Pacific (History of AFROA-USASTAF), Narrative, Monograph IV, History of VHB Construction in the Marianas and on Iwo Jima, Copy 1. 18th Historical Unit, Headquarters, 20th Air Force, APO 234.

establishment of "stepping stones" and home bases for forces focused on defeating Japan.<sup>25</sup> The capture of the Mariana Islands from the occupying Japanese was an integral component of the overall Pacific campaign and strategy.

Admiral Nimitz mobilized to recapture that part of the Pacific in December 1944. Truk, in the Caroline Islands, was the first Japanese bastion the Allied forces would attack. This assault was scheduled for 15 June 1945. After Truk was taken, three islands in the Marianas (Saipan, Tinian, and Guam) were to be captured. These islands were the most important objective of the campaign. They would provide a site for an advance naval base for the Fifth Fleet. From these locations, other isolated Japanese-held islands could be captured and the Japanese navy and shipping could be disabled.<sup>26</sup>

Upon further study, it was realized that Truk could be bypassed and attention paid to Saipan, Tinian, and Guam. D-Day for Saipan was 15 June 1944, and D-Day for Guam was 18 June 1944. The Fifth Amphibious Corps was to take Saipan and the Third Amphibious Corps was to take Guam.

### ***The Capture of Guam***

The original plans for the assault on Guam on 18 June 1944 were postponed indefinitely due to the news that a Japanese naval task force was headed for the Marianas to repel the Allied advance. U.S. forces were diverted to intercept the Japanese. The Japanese were defeated in the ensuing Battle of the Philippine Sea. However, preparations to recapture Guam were further delayed due to stubborn resistance on Saipan.<sup>27</sup>

Finally, the invasion began with troops landing on Asan and Agat beaches on 21 July 1944. The main assault focused on Orote Peninsula, and eight days later the peninsula was held by American troops. From there, a thrust across the island to Pago Bay was made. This was accomplished by 31 July 1944, when the First Provisional Brigade began mopping up southern Guam. The following three weeks consisted of fierce fighting in the northern plateau. The Japanese mounted skillful resistance that caused many unexpected delays. However, by 10 August 1944, all

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<sup>25</sup> Haulman, *The U.S. Army Air Forces in World War II*, 15.

<sup>26</sup> Dod, Karl C., 1966. *The Corps of Engineers: The War Against Japan*. Washington, D.C.: Office of the Chief of Military History, United States Army, 492.

<sup>27</sup> Crowl, Philip A., 1985. *The War in the Pacific: Campaign in the Marianas*. Washington, D.C.: Center of Military History, United States Army.

organized resistance was over. Small Japanese raiding parties were still entrenched in caves and isolated mountainous areas, but these groups were rooted out by patrols.<sup>28</sup> In the main assault and subsequent fighting, 1,769 U.S. and 11,000 Japanese soldiers lost their lives. Indigenous Chamorro and American teams scoured the jungle for Japanese holdouts. By the end of September 1944, another 5,000 Japanese soldiers were dead. The campaign in the jungle continued until the end of the war.<sup>29</sup>

### **Air Base Construction in the Marianas and on Guam**

General locations for each airfield were determined based on Allied aerial reconnaissance. Base development plans<sup>30</sup> were made, but these were seen as a guide rather than a fixed plan. Upon wresting the island from the Japanese, the island commander made the final decision on the specific air base locations after consulting engineers, the XXI Bomber Command, and unit representatives. Construction on the Mariana Islands was generally focused on operational surfaces such as runways and taxiways to the detriment of living quarters and other administrative and service areas. This was due mostly to a shortage of construction units on the islands. Personnel assigned to bases in the Marianas had to endure primitive living and working conditions until additional construction personnel arrived.<sup>31</sup>

Saipan was the first island in the Marianas to have developed VHB bases. Saipan's North and South fields were designed with two, 2,591 m (8,500') long x 46 m (150') wide runways. The runways had 46 m (150') wide shoulders on each side. This was a deviation from the standard VHB construction of 61 m (200') wide paved runways with 46 m (150') wide shoulders.

Air base construction for the USAAF was planned for Guam as well. Initially, only three air bases for all services were planned on Guam—North Field for VHB groups, East (Agana) Field for Navy combat and transient aircraft, and West (Orote) Field

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<sup>28</sup> Dod, *The Corps of Engineers: The War Against Japan*, 30.

<sup>29</sup> Lodge, Major O.R. (USMC)1954 *The Recapture of Guam*. Historical Branch, G-3 Division, Headquarters, U.S. Marine Corps. (Reprinted by The Battery Press, Nashville, TN), 166.

<sup>30</sup> Hubbell, James H., Historical Editor and Edward A. Chalfant, Historical Specialist, 1945b *The Air War in the Pacific* (History of AFROA-USASTAF), Appendix III, Binder II, Special Sources, Documents 10-255, Copy 1, Monograph IV, History of VHB Construction in the Marianas and on Iwo Jima. 18th Historical Unit, Headquarters, Twentieth Air Force, APO 234.

<sup>31</sup> Hubbell, James H., Historical Editor and Edward A. Chalfant, Historical Specialist, 1945a *The Air War in the Pacific* (History of AFROA-USASTAF), Narrative, Monograph IV, History of VHB Construction in the Marianas and on Iwo Jima, Copy 1. 18th Historical Unit, Headquarters, 20th Air Force, APO 234.

for Marine and Navy fighters. The very first change to the base development plan was the addition of two new fields—Northwest Field for two new VHB groups, and Depot Field for three air depot groups. Ultimately, five fields were constructed:

- North Field, VHB groups
- Northwest Field, VHB groups
- Harmon Field (Depot), VHB aircraft depot and maintenance base, air transport command, and Twentieth Air Force Headquarters
- Agana (East) Field, USN
- West(Orote) Field, U.S. Marines and USN

Agana Field was projected to be used for Depot Field because it was already improved and would be easy to further extend the runway; however, this would change and Depot Field would eventually be built at what is now Harmon Field.<sup>32</sup> Aerial survey of the north extremity of the island indicated that the best places for North and Northwest fields would be there despite the necessity of turning jungle wilderness into air bases.<sup>33</sup>

Even as these plans were being made and the aerial reconnaissance was being conducted, plans were underway that would change the construction of air bases on Guam. Admiral Nimitz decreed that the island would be used as a base for the Pacific Fleet and a forward operating base for Commander in Chief of the Pacific Operating Area—Commander in Chief Pacific Area Command (CINCPOA-CINCPAC). The fleet facilities were so extensive that plans to build both North and Northwest fields would be put on hold indefinitely.<sup>34</sup>

The plans for construction of Depot Field and East Field also changed with the news that Guam would become a Pacific Fleet base. Depot Field changed from being a USN project to an Army project, and the construction units slated for building North Field were reassigned to Depot Field. This released USN construction crews to work on other USN projects. These changes also delayed plans for construction of Northwest Field, so units slated for construction of Northwest Field would not ship out to

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<sup>32</sup> Hubbell, Chalfant, 1945a *The Air War in the Pacific*, 60.

<sup>33</sup> Ibid., 53.

<sup>34</sup> Hubbell, Chalfant, 1945a *The Air War in the Pacific*, 54.35.

Guam until space became available.<sup>35</sup> However, VHB bases were still desperately needed to achieve tactical striking ability against Japan. This was recognized by General Harmon (USAAF) who recommended that the bases on Tinian be expanded from four airstrips to six. He also recommended that Depot Field be completed as soon as possible, as well as North and Northwest fields.<sup>36</sup>

By August 1944, aviation engineer battalions had finally reached Guam and would start building Depot, North, and Northwest fields. Both Army and Navy engineering battalions were ultimately assigned to the Fifth Naval Construction Brigade. Naval construction battalions were made part of naval construction regiments that were assigned to the brigade. Engineer aviation battalions were assigned to an engineer construction group, and later to an engineer aviation regiment, but both the group and regiment were components of the Fifth Naval Construction Brigade. This gave the USN ultimate control of all construction projects on Guam. No work orders could be obtained, except from the naval brigade.<sup>37</sup>

A base development plan had been established for the islands, but the undefined role of the XXI Bomber Command in the Marianas, continually shifting plans for VHB units, and poor initial construction materials estimates made VHB base construction in the Marianas difficult. Perhaps the thing that most complicated VHB base construction was the increase of the numbers of VHB units assigned to the Marianas. A certain number of VHB units were estimated and material began arriving for that number of units. This quickly changed, and the numbers of VHB units in the Marianas doubled, making the construction material already on the islands woefully inadequate and the prospect of additional large-scale construction on the islands poor. In the case of the 315th BW and 58th BW, no materials arrived to build housing or administrative areas in any quantity until after 1 June 1945. At Northwest Field, this meant the field had been formally dedicated, yet no material was available to complete housing, administrative, or service areas.<sup>38</sup>

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<sup>35</sup> Ibid., 56.

<sup>36</sup> Ibid., 62.

<sup>37</sup> Hubbell, Chalfant, 1945a *The Air War in the Pacific*, 62.

<sup>38</sup> Hubbell, Chalfant, 1945a *The Air War in the Pacific*, 146-147.

## **Northwest Field**

### ***Land Use Prior to Northwest Field***

Northwest Field was not always a fixture at the northern extremity of Guam. The northern portion of the island is primarily an elevated limestone plateau, approximately 500 feet above sea level, and the only landmarks were Ritidian Point and Mt. Machanao. The only other constant on the northern portion of the island was dense jungle. This is how the first inhabitants found the island when they began arriving from southeast Asia in approximately 1500 BC.

On Guam in general, most southern towns and villages were located along the coast with only a few established inland. Alternatively, the northern plateau had inland inhabitants rather than coastline settlements due to the rugged coastline terrain. Prior to European occupation within the project area, it appears, based on archeological surveys, that the project area was mainly used for horticulture, gathering, and processing food, mostly during the Latte period from AD 1000 to AD 1650. The surveys did not indicate that any permanent prehistoric villages or habitation sites were present, only briefly occupied food procurement and processing locations. However, Spanish records indicate the village of Upi was well established on the northern plateau near the present location of Northwest Field. No substantial trails or roads appear to have existed, except for inconspicuous footpaths used to gather plants or hunt.<sup>39</sup>

The first Spaniards arrived in 1521, and Guam became a recurrent port on their travels. They formally claimed the island in 1565, and finally established their first permanent mission in 1668. During the Spanish era, which lasted until 1898, no substantial changes in land use or development occurred in the area of Northwest Field. It remained largely an uninhabited food procurement area. This may have been partially due to the drastic reduction of native Chamorro inhabitants due to disease and the Spanish-Chamorro War, also called "the Reduction," which lasted from 1671 to 1698.<sup>40</sup> At the time the Spanish arrived,

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<sup>39</sup> Geo-Marine. 2006. Results of Cultural Resources Inventories for Establishment and Operation of an Intelligence, Surveillance, Reconnaissance, and Strike Capability and the Deployment of RED HORSE Squadron Andersen Air Force Base, Guam.

<sup>40</sup> Rogers, Robert F., 1995. *Destiny's Landfall: A History of Guam*. University of Hawaii Press.

there were estimated to be 30,000 Chamorro people. Less than twenty-five years later the native population was only 1,600.<sup>41</sup>

American administration of Guam commenced in 1898 after the island was surrendered to Captain Henry Glass, USN, during the Spanish-American War. The United States controlled Guam for the next forty-two years until the Japanese captured the island. During the first American tenure on Guam, various municipalities were recognized. The area of Northwest Field was in the Machanao Municipality named after Mt. Machanao near the northern tip of the island.<sup>42</sup> There does not appear to be any substantial changes to the area in the passage of Guam from Spain to the United States.

In the fledgling months of WWII, the Japanese stormed the island and occupied it. Defended only by the island's Insular Force Guard and a small U.S. Marine detachment, Guam officially surrendered to the Japanese on 10 December 1941. The Japanese invasion and capture of Guam from the United States in 1941 was the beginning of a changing landscape in the area around Northwest Field. By February 1944, the Japanese were in the process of building a major road. The road was being cleared and was 3 m (9.8 feet) wide, just inland and skirting the west coast, terminating near Ritidian Point. Based on later road maps of the area, it appears that it may never have been finished.

An existing 3 m (9.8 feet) wide road made of clay and crushed volcanic rock, along with a 2 m (6.6 feet) wide branch made of clay and crushed volcanic rock running north to the base of Mt. Machanao, was further improved by the Japanese to allow tanks to travel along them. The branch appears to be the current perimeter road that runs from Potts Junction to Ritidian Point. An assessment of the area immediately east of the road (where Northwest Field is situated) was determined to be a good place for engineers to place a sawmill and was estimated it could sustain about 100 people. West of that area was a heavily wooded area that the Japanese indicated was inhabited by native people and was off limits to road construction. They also noted it was difficult to pass through the woods. The area had a horse trail through the middle of it. If people had been living there, any

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<sup>41</sup> Cordy, Ross and Jane Allen, 1986. Archaeological Investigations of the Agana and Fonte River Basins, Guam. J. Stephen Athens Archaeological Consultant, Honolulu, Hawai'i. Submitted to U.S. Army Engineer District, Fort Shafer, Hawaii.

<sup>42</sup> U.S. Navy, n.d., *U.S. Naval Government of Guam*. Corrected Orthography of Guam.

trace of their habitation sites was probably obliterated by Northwest Field construction.<sup>43</sup>

After Guam was retaken by Allied forces, development steadily increased for both military and civic reasons, creating the landscape we see today. Northwest Field was constructed and roads were added, improved, and expanded, and people began to inhabit the coast in previously uninhabited areas.

### ***Description of Northwest Field***

Northwest Field is situated at the northern tip of Guam on what is now Andersen Air Force Base, immediately south of Mt. Machanao and Ritidian Point. It is composed of two main activity areas; the airfield and its surrounding support infrastructure, and the munitions storage area to the east and southeast. The airfield is positioned on a northeast-southwest axis, and the munitions area is placed on a northwest-southeast axis. The following description focuses on the airfield portion of Northwest Field, with only a brief discussion of the munitions area.

The airfield area comprises north and south runways and their associated taxiways and service areas. The north runway, taxiway, and service area was used by the 502nd Bomb Group (BG), 331st BG, the 24th Air Service Group (ASG), and the 75th ASG. The south runway, its three main taxiways, and the service area were used by the 501st BG, 16th BG, 73rd ASG, and the 76th ASG.

The northernmost element of the airfield operations area was the rectangular north service apron or Service Center H. A taxiway ran south and doglegs to the southwest from Service Center H, to the west end of the main north taxiway. An angled taxiway on the east end of the service area leads to the east end of the north taxiway. The taxiway paralleled the north runway approximately 800' to the north. Approximately twenty-six hardstands (small circular aircraft parking spaces) were completed along the north taxiway. These were supplemented with three parking aprons (larger rectangular multi-aircraft parking areas) along the north side of the taxiway.

The north runway was offset to the east of the south runway. The runway was 2,591 m (8,500') long x 152 m (500') wide (61 m

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<sup>43</sup> MARC (Micronesian Area Research Center at the University of Guam) 2007 *"Military Map of Area Around Guam, February, 1944."* Top secret Japanese military map of Guam located in the MARC map archives. Translated to English by Ms. Fu Hendricks.



[200'] wide paved runway flanked by a 46 m [150'] paved shoulder on either side). A narrow northeast/southwest-trending taxiway was located in the western third and eastern third of the runway connecting the north runway with the south runway. A larger 152 m (500') wide northeast/southwest-trending taxiway connected the offset runways at either end. Approximately 304 m (1,000') separated the two runways.

The south runway was offset to the west of the north runway. The south runway was 2,591 m (8,500') long x 152 m (500') wide 61 m (200') wide paved runway flanked by a 46 m (150') paved shoulder on either side). The two narrow northeast/southwest-trending taxiways from the north runway enter in the eastern and western third of the runway. Two straight north/south-trending taxiways led from the runway to the south taxiway on the south side, opposite the two narrow northern diagonal taxiways, with a third taxiway identical to these equidistant between them. A 152 m (500') wide north/south taxiway accessed the runway on either end.

The first southern taxiway was the same length as the south runway. It was accessed by the three northern equidistant narrow taxiways in the center of the runway and by the two larger taxiways on the end. The taxiway was flanked on the north and south by parking aprons, except for two hardstands located on the south side in the east half of the taxiway. Two narrow north/south taxiways extended south from the south taxiway opposite the two outermost narrow taxiways that enter from the north. Two narrow north/south taxiways accessed either end of the first southern taxiway. The taxiway on the east end led to the south service apron. The westernmost taxiway led to a second south taxiway.

The second southern taxiway extends from the westernmost taxiway to the easternmost narrow central taxiway that led from the eastern third of the first southern taxiway. This second southern taxiway was also flanked by parking aprons used by the 501st BG to the west and the 16th BG to the east. A southeast-trending diagonal taxiway exited the second taxiway opposite the western inner narrow taxiway on the north side and leads to a third southern taxiway. On the east end of the second taxiway, a north/south taxiway with a southwest dogleg led to the third southern taxiway and the south service apron.

Surrounding the runways were the aircraft service areas for the 16th BG, 331st BG, 501st BG, and 502nd BG. Each BG service area

and cantonment area occupied a different quarter of the airfield. The cantonment area comprised barracks, mess hall, latrines, dispensary, headquarters, briefing room, and various related structures. The 331st BG and 502nd BG were located in the northwest and northeast quadrants, respectively, with the 24th ASG and 75th ASG cantonment area situated similarly between the two BG cantonment areas (USAAF 1945c,<sup>44</sup> 1945d,<sup>45</sup> 1945f,<sup>46</sup> 1945g,<sup>47</sup> and 1945h<sup>48</sup>). The 501st BG and 16th BG cantonment areas were located in the southwest and south-central portion of the airfield with the 76th ASG and 73rd ASG cantonment areas immediately northeast. The 315th BW headquarters was located immediately south of the 501st cantonment area, along the perimeter road.<sup>49</sup>

The munitions storage area was located south and east of the airfield on a northwest to southeast axis. It was arranged on a grid system accessed by roads that defined the grid. This area was composed of munitions storage structures.

### ***Construction of Northwest Field***

Northwest Field was drawn by the Seventh Air Force engineers on 9 April 1944, based on extensive reconnaissance missions flown over Guam.<sup>50</sup> On 17 January 1945, the XXI Bomber Command officially requested approval for two new airfields in the Mariana Islands, North and Northwest fields. Although arrangement on the landscape would differ based on local conditions, each field was to conform to standard design elements of VHB bases, including two 2.5 kilometers (k) (1.6 miles) long runways that were 152 m (500') wide (61 m [200'] wide paved runway flanked by 46 m [150'] wide shoulders) with parking facilities for six VHB squadrons. Together, these two

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<sup>44</sup> USAAF 1945c. Historical Data, Narrative History of Ground Echelon, 331st Bombardment Group, 315th Bombardment Wing, XXI Bomber Command, 20th Air Force, Period: 1 April to 31 May 1945, Northwest Field, Guam, Marianas Islands, 3-5.

<sup>45</sup> USAAF 1945d. Historical Data, Narrative History Documents of 24th Air Service Group (315th Wing) XXI Bomber Command Period: 15 April to 31 May 1945., 5-6.

<sup>46</sup> USAAF 1945f. Historical Data, Narrative History Documents of 24th Air Service Group (315th Wing) XXI Bomber Command Period: 1 June to 30 June 1945, 1-2.

<sup>47</sup> USAAF 1945g. Historical Data, Narrative History of Ground Echelon, 331st Bombardment Group, 315th Bombardment Wing, XXI Bomber Command, 20th Air Force, Period: 1 June to 30 June 1945, Northwest Field, Guam, Marianas Islands, 7-9.

<sup>48</sup> USAAF 1945h. Historical Data, Narrative History of Ground Echelon, 331st Bombardment Group, 315th Bombardment Wing, XXI Bomber Command, 20th Air Force, Period: 1 July to 31 July 1945, Northwest Field, Guam, Marianas Islands, 2.

<sup>49</sup> Harrington, George E. and William Leasure, n.d. *A New Century in Air Power*. Second Edition, edited by George E. Harrington and William Leasure, Monarch Systems, Ohio.

<sup>50</sup> Hubbell, Chalfant, 1945a *The Air War in the Pacific*, 15.

bases would provide enough room for one VHB wing. No trained B-29 units had been assigned to Guam yet so this scaled-down approach to building the two bases worked for the time being. However, word soon came that the 315th BW and 316th BW had been committed to the Twentieth Air Force (however, the 316th BW was never activated). This reality spurred expansion of both North and Northwest fields to accommodate an entire bomb wing each.

Although the augmentation and expansion of both fields was approved, no fixed completion date was given. Rather, the Commander of the Forward Area was requested to establish appropriate priorities for the work and to furnish estimated completion dates for the airstrips. Despite the refusal to give firm completion dates, tentative target completion dates were established. After further pressure, firm dates were given for completion of both fields. The dates for Northwest Field were 1 June 1945 for the south runway, taxiway, service apron, sixty hardstands, and minimum housing and service facilities, and 1 July 1945 for the north runway and sixty additional hardstands. The remaining taxiways and hardstands were to be finished a month later.<sup>51</sup>

The general location for the field was a dense jungle known to contain Japanese holdouts. In late October and early November 1944, the first actual inspections on the ground were conducted. By 6 November 1944, the actual site for Northwest Field was determined. The 72nd Naval Construction Battalion laid out the field as it was designed on paper by 7th Air Force engineers. During December, the 1886th Engineer Aviation Battalion conducted additional targeted surveys for control and planning purposes, which were completed by mid-January 1945.<sup>52</sup>

The construction of Northwest Field was mainly undertaken by the 1886th Engineer Aviation Battalion. They arrived on Guam in December 1944, and set up a temporary bivouac area where they lived during the initial stages of Northwest Field construction.<sup>53</sup> Construction on Northwest Field, Work Order No. 86-10, began on 9 January 1945, and progressed until 25 January 1945, when the battalion's heavy equipment was borrowed to finish runway one at North Field.<sup>54</sup> Approximately 152 acres of

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<sup>51</sup> Hubbell, Chalfant, 1945a *The Air War in the Pacific*, 111.

<sup>52</sup> Hubbell, Chalfant, 1945a *The Air War in the Pacific*, 118-119.

<sup>53</sup> Brennan, Francis J. (1st Lt., CE, Historical Officer), 1944. History of the 1886th Engineer Aviation Battalion, APO 246, c/o Postmaster, San Francisco, California, 1 November 1944 to 31 December 1944, 2-4.

<sup>54</sup> Busch, Richard A. (2nd Lt., CE, Historical Officer) 1945a. History of the 1886th Engineer Aviation Battalion, APO 246, c/o Postmaster, San Francisco, California, 1 January 1945 to 31 January 1945, 2.

land had been cleared prior to this delay, which was accomplished with help from the 1899th Aviation Engineering Battalion.<sup>55</sup>

Progress was slow; the hard coral ground and jungle had to be blasted using dynamite. Hundreds of holes were drilled by well drilling machines so dynamite charges could be set and then exploded in sequence. Dynamite blasts were followed by earth moving machines clearing the debris, and men with jackhammers smoothing the remaining uneven areas. A continuous line of dump trucks hauled the material away. This continued twenty-four hours a day for months.<sup>56</sup> The clearing of Northwest Field accounted for approximately one-quarter of the total time it took to complete the field.

By the end of January, the construction of forty-five 9 m (30') x 31 m (100') warehouses and fifty 18 m (60') x 31 m (100') warehouses was about 30 percent complete. The south runway area had been half cleared and the south taxiway area had been 35 percent cleared. At this point, construction appeared to be on schedule.<sup>57</sup> January also brought some excitement to Northwest Field when two Japanese soldiers were killed and others were wounded or escaped security patrols.<sup>58</sup>

During February, work nearly came to a halt because the 1886th and 1899th were pulled out for higher priority projects.<sup>59</sup> This threatened to disrupt the entire VHB program because careful plans had been made to move various bomb wings to the islands based on the assumption the VHB air bases would be serviceable, if not complete. This set in motion a series of conferences between the USN and the USAAF in which the XX Bomber Command sought assurances that their airfields would be given priority over the USN construction projects. The island commander, a naval officer, routinely gave priority to USN nonessential projects such as road building over high priority Air Force projects.

These conferences and the debate over project priorities spurred the CINCPOA to action. He reported that Northwest Field would

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<sup>55</sup> Hubbell, Chalfant, 1945a *The Air War in the Pacific*, 114.

<sup>56</sup> USAAF, 1945b Historical Data, Narrative History Documents of 315th Bombardment Wing, XXI Bomber Command, 20th Air Force, Period: 17 March 1945 to 31 May 1945, ii.

<sup>57</sup> Hubbell, Chalfant, 1945a *The Air War in the Pacific*, 128.

<sup>58</sup> Busch, 1945b. History of the 1886th Engineer Aviation Battalion, 3.

<sup>59</sup> Busch, Richard A. (2nd Lt., CE, Historical Officer, 1945b. History of the 1886th Engineer Aviation Battalion, APO 246, c/o Postmaster, San Francisco, California, 1 February 1945 to 28 February 1945, 1-2.

not be operational if the current priorities remained in place and recommended that low priority projects be postponed until Northwest Field was operational. As a result, the island commander was ordered to assign additional construction units to Northwest Field construction and postpone nonessential work projects.<sup>60</sup>

Finally, after the debates were dispensed with, work in March on Northwest Field resumed in earnest.<sup>61</sup> To speed construction, other units were attached to the battalion including the 3086th Dump Truck Company consisting of thirty-two 2-1/2 ton trucks and 106 men, two enlisted men from the 933rd Engineer Aviation Regiment to assist with welding, and eight heavy equipment operators of the 25th Naval Construction Battalion. By the end of March, the south runway had been completely cleared and 15 percent paved, while the south dispersal area made progress also with 75 percent of taxiway number one cleared and 35 percent of taxiway two cleared. During February and March, the battalion had five encounters with groups of Japanese soldiers, killing two, wounding or capturing several, while others escaped completely or with wounds.<sup>62 63</sup>

The job of constructing housing for the 315th BW (Work Order No. 86-56) was begun on 6 April 1945, along with continuing work on the south runway. No attempt was made to construct floors or frames for the tents initially housing personnel because work was begun almost immediately on prefabricated barracks. The island commander assigned the 25th, 48th, 53rd, and 94th Naval Construction Battalions to work alongside the 1886th and 1899th to aid in completing Northwest Field.<sup>64</sup> By the end of April, approximately 264,540 cubic yards of earth had been moved, but the field was far from completion. When the 76th and 73rd Air Service Groups arrived in April, their areas had been cleared, but little else had been done. They lacked nearly everything, including latrines. When the 16th BG arrived a few days after the Air Service Groups, they had the good fortune of having latrines already set up, although they spent the first few nights in pup tents until their squad tents could be erected.<sup>65</sup>

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<sup>60</sup> Hubbell, Chalfant, 1945a *The Air War in the Pacific*, 121-123.

<sup>61</sup> Busch, Richard A. (2nd Lt., CE, Historical Officer, 1945c. History of the 1886th Engineer Aviation Battalion, APO 246, c/o Postmaster, San Francisco, California, 1 March 1945 to 31 March 1945, 1-3.

<sup>62</sup> Busch, 1945b, Historical Data, Narrative History Documents of 315th Bombardment Wing, 3.

<sup>63</sup> Busch, 1945c, History of the 1886th Engineer Aviation Battalion, 3-4.

<sup>64</sup> Hubbell, Chalfant, 1945a *The Air War in the Pacific*, 124.

<sup>65</sup> USAAF 1945a. Historical Data, Narrative History of 16th Bombardment Group (VH) (315th Bombardment Wing (VH)), XXI Bomber Command, 20th Air Force, Period: 1 March to 31 May 1945, 8-9.

Throughout May, work continued on the south runway and the housing area. The 103rd Naval Construction Battalion was added to those already at the field. The south runway had been cleared and the 1880th Engineer Aviation Battalion began paving it on 18 May, and completed the huge task on 25 May 1945. Work on 315th BW housing was approximately 43 percent completed by the end of May, with the Wing Headquarters, 76th Air Service Group, and 73rd Air Service Group in barracks. Work on the control tower also continued, but encountered some difficulty due to its height (22 m [72'] without the control box superstructure on top). A water well that was to supply the area was deemed a failure because after 152 m (500'), no water table was reached. Also at the end of May, the north runway and warm-up aprons had been completely cleared and the north taxiway system had been 80 percent cleared and 22 percent coral surfaced. The south warm-up aprons had also been completely graded and the south service apron had been surfaced with coral.<sup>66</sup>

By June 1, sufficient progress had been made to hold an hour-long formal dedication ceremony at Northwest Field. The 59th Air Force Band played followed by the first landing of aircraft on the south runway. The invocation was given by Chaplain Frank L. White of the 1899th Engineer Aviation Battalion (USAAF). Northwest Field was presented by Col. Lee B. Washbourne, Commanding Officer of the 933rd Engineer Aviation Regiment (USAAF) to Brigadier General Frank A. Armstrong Jr., Commanding General of the 315th BW. Addresses were made by Major General Henry L. Larsen, Island Commander, USMC; Lt. General Barney M. Giles, Commanding General of the USAAF Pacific Operating Area; and Admiral Chester W. Nimitz, Fleet Admiral of the USN.<sup>67</sup>

Soon after the dedication, the aircraft of the 315th BW began to arrive. Construction continued, but was lagging behind schedule. Parking aprons were constructed in lieu of hardstands, which were originally planned.<sup>68</sup> They were projected to be 53 m (175') wide and were in increments of 46 m (150') for each aircraft. This was completely unacceptable to the 315th BW command who

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<sup>66</sup> Brennan, Francis J. (1st Lt., CE, Historical Officer), 1945b. History of the 1886th Engineer Aviation Battalion, APO 246, c/o Postmaster, San Francisco, California, 1 May 1945 to 31 May 1945, 2.

<sup>67</sup> USAAF, 1945e. Formal Opening Ceremony for Northwest Field, Friday, First of June, Nineteen Hundred and Forty Five, Central Tower, Northwest Field, Guam, Mariana Islands [Program].

<sup>68</sup> Hubbell, James H., Historical Editor and Edward A. Chalfant, Historical Specialist, 1945c *The Air War in the Pacific (History of AFROA-USASTAF), Appendix III, Binder IV, Layout and Design Drawings (Continued), Documents 278-302, Monograph IV, History of VHB Construction in the Marianas and on Iwo Jima*. 18th Historical Unit, Headquarters, Twentieth Air Force, APO 234.

protested vigorously because this would only leave 2.5 m (8') of clearance between parked aircraft wingtips, 6.5 m (21') from taxiing aircraft, and would subject the aircraft and personnel to the propeller blast from all lead aircraft, making accidents much more likely. The parking aprons were also unacceptable because in case of explosion, the damage would not be localized to one aircraft, but prone to cause extensive collateral damage. So, command ordered that if parking aprons were to be used, they would have to be 76 m (250') in depth from the center of the taxiways, built in 61 m (200') increments, with no more than five planes to an apron. The 927th Construction Regiment protested the specifications, arguing that the specifications would increase the work effort by 60 percent. The problem was forwarded to the island commander, but no determination was made until after July.<sup>69</sup>

Notwithstanding the controversy over the aprons, construction continued through June and July. In mid-June, it was decided that the naval units would stay at Northwest Field, and even more aviation construction battalions would be added to complete the field as soon as possible so the construction units could be utilized elsewhere. As a result, the 1887th Engineer Aviation Battalion began construction of the field. The continued dedication of resources meant the north runway was completely paved by 30 June 1945, on schedule. Also, by the end of June 16, BGs housing was completed, sixty-two of seventy-seven authorized buildings in the headquarters area had been completed, and sixty-eight of seventy-four authorized buildings in the service area had been completed. The overall picture at the end of June indicated that only 46 percent of the construction for Northwest Field had been completed.<sup>70</sup>

Work progressed through July, but not as fast as some had hoped. By the end of July, only 80 percent of the south taxiway and parking area was complete, the north taxiway was only 50 percent complete, the parking aprons were only 60 percent graded, and most operational parking surfaces remained unpaved. Despite this, 161 aircraft of the 315th BW were operating from the field by 31 July 1945. Nearly all personnel of the 315th BW were in semi-permanent housing by the end of July.<sup>71</sup> Various construction projects pushed on through early August. However, upon cessation of hostilities, a stop work order was

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<sup>69</sup> Hubbell, Chalfant, 1945a, *The Air War in the Pacific*, 125.

<sup>70</sup> Hubbell, Chalfant, 1945a, *The Air War in the Pacific*, 127.

<sup>71</sup> USAAF, 1945i. Historical Data, Narrative History Documents of 315th Bombardment Wing, 253.

issued, and Seabee units were removed from Northwest Field. This virtually brought construction at Service Center H north of the north runway in the 502nd and 331st to a halt. Although other personnel were assigned some of the construction tasks, only one of eight authorized warehouses were built for the service center by the end of August. Focus had been on finishing housing for the 502nd and 331st BGs. By the end of August, barracks were 90 percent complete for these two groups. Also at this time, the extent of major construction had been reached. No other major projects were undertaken, and even large-scale projects that were underway were abandoned as personnel and equipment were sent stateside or moved elsewhere.<sup>72</sup>

### **315th Bomb Wing**

The 315th BW was activated on 17 July 1944, at Peterson Field in Colorado Springs, Colorado. The combat arm consisted of four BGs, the 16th BG, 331st BG, 501st BG, and 502nd BG, each with three VHB squadrons. The bomb groups were supported by the 23rd Air Depot Group, 73rd Service Group, 76th Service Group, 24th Air Support Group, the 75th Air Support Group, 480 Aviation Squadron, 827th Chemical Company Air Operations, and the 339th Signal Company Wing. There were also four photographic squadrons, one attached to each bomb group. These included the 23rd Photo Lab Group attached to the 16th BG, the 20th Photo Lab Group attached to the 501st BG, the 29th Photo Lab Group attached to the 502nd BG, and the 30th Photo Lab Group attached to the 331st BG.<sup>73</sup>

When General Harmon took command in August 1944, the deployment of additional B-29 wings was very uncertain. As late as October 1944, General Arnold informed General Harmon that there were no plans for commitment of VHB forces to the Pacific theater beyond those committed in April. Two newly organized wings, the 315th BW and 316th BW, were definitely planned for commitment to the Philippines as XXI Bomber Command. However, General Harmon was convinced that the Marianas were the one area from which early mass bombing of Japan could be conducted.<sup>74</sup>

General Harmon immediately urged General Arnold to defer final commitment of the two wings until plans could be presented for using them in the Marianas, and later, possibly in the Ryukyus

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<sup>72</sup> USAAF, 1945i. Historical Data, Narrative History Documents of 315th Bombardment Wing, 4.

<sup>73</sup> Swann, *A Unit History of the 315th Bomb Wing*, pg.58-198.

<sup>74</sup> Craven and Cate, *The Pacific: Matterhorn to Nagasaki*, 516.



Islands. Due to General Harmon's persistence, the wings were finally assigned to the XXI Bomber Command in Guam. After completing operational training at five schools around the United States, the 315th BW eventually arrived at Northwest Field in Guam. General Armstrong would command their mission of specialized nighttime bombing of Japan's oil refineries.<sup>75</sup>

By April 1945, USAAF intelligence decided that the petroleum industry in Japan was in such a critical state that the destruction of facilities and stores would immediately benefit the Allied efforts. Consequently, General LeMay and Lt. General Barney M. Giles, Chief of Air Staff, who came to Guam as the deputy commander of the Twentieth Air Force, eventually decided that the 315th BW would devote its efforts exclusively to oil targets during the combat testing period. This decision had the endorsement of General Carl Spaatz (USAAF), who was slated to command all B-29s under the United States Army Strategic Air Forces, and had been an advocate of the oil campaign in the European theater.<sup>76</sup>

The 315th BW was moved to Guam March through April 1945; training began immediately through June. Wing training upon reaching Guam consisted of navigational flying, formation flying for after the surrender, and shakedown (performance testing) flights. There were also radarscope photography reconnaissance missions going on at this time. Twenty-seven radarscope missions were flown to provide images and other reconnaissance information about the primary targets the 315th BW would be bombing. The first of seven shakedown missions was flown by the 315th BW on 16 June 1945. These missions prepared the wing for strikes against Japan's oil manufacturing and refining sites. The first two missions were a calibration mission and a night orientation mission. The third mission was a daytime mission to Rota, an isolated active Japanese outpost that had been bypassed by the island-hopping campaign. The next mission was to Truk and was the first night mission.<sup>77</sup> Once the initial missions had been completed, strikes against the mainland were commenced.<sup>78</sup>

One of the problems encountered during bombing missions was the period of time that planes were exposed to antiaircraft fire.

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<sup>75</sup> Craven and Cate, *The Pacific: Matterhorn to Nagasaki*, 645.

<sup>76</sup> Ibid.

<sup>77</sup> Atkins, Harold F, 1987. *The 485th Squadron By Harold F. Atkins, 501st Bomb Group* in Anthologies of the 315th Bomb Wing (VH) XXI Bomber Command, 20th Air Force, Northwest Field, Guam WWII, Volume 1. Byron Kennedy and Company, St. Petersburg, Florida.

<sup>78</sup> USAAF, 1945i. Historical Data, Narrative History Documents of 315th Bombardment Wing.

Since the B-29s approached the target in single file along a set heading and altitude (spaced evenly and far apart), the long duration of the bombardment permitted defensive guns to locate the planes. This problem was solved by Captain William C. Leasure (USAAF), General Armstrong's staff navigator and wing tactical plans officer. He developed a "compressibility" procedure in which aircraft would "compress" the distance between them. Compressing reduced the bombing run duration to about 20 percent of the takeoff time.<sup>79</sup> This greatly minimized flight crew exposure to enemy fire. It became the model for all subsequent bombardment runs.<sup>80</sup>

The unit's first combat mission against mainland Japan occurred 26 June 1945 (Mission 1, 26-27 June 1945). Thirty-five B-29s made the bombing run against the Utsube River Oil Refinery. Of the thirty-five B-29s on the raid, thirty-three made it to the target. By using the Eagle radar system, the airmen were able to drop their bombs through the cloud cover to the target. However, the mission had mixed results. Photo reconnaissance missions indicated that only about 30 percent of the facility was destroyed and another bombing run would be required to complete the mission.<sup>81</sup>

The next three missions were similar to the first (Mission 2, 29-30 June 1945, Mission 3 2-3 July 1945, and Mission 4, 6-7 July 1945). Follow-up bombing raids were required to bring down the targets. These missions were necessary to become familiar with the new radar system and the peculiarities of Japan's weather and location. By Mission five (9-10 July 1945), the 315th BW began destroying targets on the first run. It was during these missions that the first aircraft and crewmen were lost. On mission five, a landing gear collapsed on landing at Northwest Field causing the B-29 to burn (the crew was saved). On mission six, the first combat losses were reported with one aircraft missing after attacking its target and a second forced to ditch after three propellers were lost.<sup>82</sup>

By mission twelve against the Japanese Empire, the wing had grown in size and experience. On 1 August 1945, 130 B-29s took off to attack various targets throughout Japan, a substantial

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<sup>79</sup> Swann, *A Unit History of the 315th Bomb Wing*, 43.

<sup>80</sup> NRHP (National Register of Historic Places, Northwest Field, National Register National Form. 1997. Prepared by Richard K. Olmo, International Archaeological Research Institute, Inc, 1/25/97.

<sup>81</sup> USAAF 1945i. Historical Data, Narrative History Documents of 315th Bombardment Wing, pg. 24.

<sup>82</sup> USAAF 1945i. Historical Data, Narrative History Documents of 315th Bombardment Wing, pg. 30.

increase over the thirty-five aircraft that flew the first mission in June. Mission 13 on 5-6 August 1945 targeted the Ube coal liquefaction plant and definitively destroyed the refinery, and 80 percent of the storage facilities and workshops, and 50 percent of the neighboring iron works.<sup>83</sup> At the same time, the 509th composite group, a former subordinate unit of the 315th BW, dropped the first atomic bomb on Hiroshima. Three days later, a second atomic bomb was dropped on Nagasaki. Even with the tremendous destruction of these two bombs, Japan did not surrender and the 315th BW prepared for further missions.<sup>84</sup>

Mission fourteen, 9-10 August 1945, the 315th BW returned to destroy the Nippon Oil Refinery at Amagasaki. On Mission fifteen, 134 B-29s would target the Nippon Oil Refinery at Tsuchizaki. As the 315th BW finished its fifteenth bomb run on 15 August 1945, President Truman announced the unconditional surrender of Japan and the end of WWII. The 315th BW was the last unit to drop bombs on Japan. Because of the oil refinery's location in northern Honshu, this particular mission logged over 3,239 nautical miles and was the longest nonstop combat mission on record, as well as the last combat mission of the war. The crew of the "Uninvited" was inundated with publicity as it returned because it was the last plane over Japan at the end of the war.<sup>85</sup>

Between June 26 and August 14, the 315th BW flew fifteen missions against oil refineries or synthetic plants in Japan.<sup>86</sup> Missions included:

- Mission 1 - June 26/27 - Utsube Oil Refinery at Yokkaichi
- Mission 2 - June 29/30 - Nippon Oil Company at Kudamatsu
- Mission 3 - July 2/3 - Maruzen Oil Company at Smimotsu
- Mission 4 - July 6/7 - Maruzen Oil Company at Smimotsu
- Mission 5 - July 9/10 - Utsube Oil Refinery at Yokkaichi
- Mission 6 - July 12/13 - Mitsubishi Oil Company at Kawasaki
- Mission 7 - July 15/16 - Nippon Oil Company at Kudamatsu
- Mission 8 - July 19/20 - Nippon Oil Company at Kansai

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<sup>83</sup> Ibid., 37.

<sup>84</sup> Swann, *A Unit History of the 315th Bomb Wing*, pg.52.

<sup>85</sup> Harrington, Leasure, *A New Century in Air Power*, pg. 44.

<sup>86</sup> USAAF 1945i. Historical Data, Narrative History Documents of 315th Bombardment Wing, pg. 24-40.

- Misison 9 - July 22/23 - Imperial Fuel Industry Company at Ube
- Mission 10 - July 25/26 - Mitsubishi Oil Company at Kawasaki
- Mission 11 - July 28/29 - Toa Fuel Company at Smimotsu
- Mission 12 - August 1/2 - Mitsubishi Oil Company at Kawasaki
- Mission 13 - August 5/6 - Imperial Fuel Industry Company at Ube
- Mission 14 - August 9/10 - Nippon Oil Company at Kansai
- Mission 15 - August 14/15 - Nippon Oil Company at Tsuchizaki

During the forty-five-day interval in which combat operations were conducted, the wing flew 1,200 sorties and dropped 9,084.4 tons of bombs on primary targets. This resulted in six million barrels of oil tank storage being destroyed and it reduced Japan's refining capacity from 90,000 to 17,000 barrels a day.<sup>87</sup> There were three aircraft lost during bombing operations and thirty casualties including one killed, three injured, and twenty-six missing.

However, the end of the war did not bring a stop to flight time for the 315th BW. New concerns were immediately realized. Over 70,000 prisoners of war (POWs) were being held by the Japanese and were in desperate need of food, clothing, and medical supplies while waiting to be released. It became the job of the Twentieth Air Force to airlift the needed provisions to mainland China, Japan, Korea, Manchuria, and Formosa.<sup>88</sup> Special wooden racks were built that fit inside the bomb bays to deliver basic medical and food supplies. Cables were slung under the racks and attached to the bomb release shackles. Parachutes were packed on top of the supplies with the straps anchored to the interior to ensure deployment of the parachutes when released by the bombardier.<sup>89</sup> The static lines that allowed the parachutes to open then had to be pulled back inside the bomb bays by hand.

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<sup>87</sup> Leary, William M.2000. "The Strategic Air War Against Japan" in *Pearl to V-J Day: WWII in the Pacific*, A Symposium sponsored by the Air Force History and Museum Program and the Air Force Historical Foundation. July 20-21, 1995. Naval Officers' Club, Bethesda, MD. Washington, D.C.: Air Force History and Museum program.

<sup>88</sup> USAAF 1945i. Historical Data, Narrative History Documents of 315th Bombardment Wing, appendix.

<sup>89</sup> Bisnett, Clayton, 1987. *My Most Memorable Mission by Clayton Bisnett, 331st Bomb Group* in Anthologies of the 315th Bomb Wing (VH) XXI Bomber Command, 20th Air Force, Northwest Field, Guam WWII, Volume 1. Byron Kennedy and Company, St. Petersburg, Florida, pg. 7.

The individual with this duty often wore a parachute in case they were to fall through the bomb bay doors.<sup>90</sup>

On 29 August 1945, the 315th BW began POW operations. Thirty aircraft participated in the first POW mission and made supply drops in Honshu and Manchuria. Two main tasks were identified in this first mission. Part of the wing would fly to Tinian and pick up 205,000 pounds of food, while the remainder of the wing would fly to the Philippines for parachutes that had been stockpiled for the invasion of Japan. These two groups met in Saipan to assemble and begin delivery of the aid packages.<sup>91</sup>

Delivery of crucial aid was more difficult than it appeared. The POW camps were small and hard to locate. This made the drops very difficult. Supplies could not be dropped directly on the camps because if a parachute failed the free-falling supplies could injure or kill waiting POWs.<sup>92</sup> During these humanitarian missions, three B-29s of the 315th BW and their crews were lost.<sup>93</sup> Twenty-nine B-29 aircraft participated in the second POW mission to Tokyo and fifty-two participated in the third mission to Kobe-Osaka, Shikoku, Nagoya, and the northern Honshu area. Five more POW missions were flown with only two to seven aircraft used.<sup>94</sup>

Upon completion of rescue operations, the wing began practicing for the V-J Day celebrations, which required a formation flyover of the surrender ceremonies taking place on the USS *Missouri* in Tokyo Bay. For most of the pilots and crew, this would be the first daytime flight over Japan, where they would witness the destruction of the Japanese cities they had bombed.<sup>95</sup>

After the POW missions, the 315th BW was rapidly shrinking. Every day, more men were being processed out of the unit. Those that remained were involved in fewer and fewer activities. Flight operations were drastically scaled back and were reduced mostly to mail runs to Okinawa and Iwo Jima. Other members of

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<sup>90</sup> Griffin, *A Collection of Stories*, 26.

<sup>91</sup> USAAF 1945i, Historical Data, Narrative History Documents of 315<sup>th</sup> Bombardment Wing, pg. 49.

<sup>92</sup> USAAF 1945j. 1945j. Historical Data, Narrative History Documents of the 16th Bomb Group (VH), 315th Bomb Group VH, Period: 1 August to "VJ" Day.

<sup>93</sup> USAAF 1945a. Historical Data, Narrative History of 16<sup>th</sup> Bombardment Group, pg. 50.

<sup>94</sup> USAAF 1945i. Historical Data, Narrative History Documents of 315th Bombardment Wing, 25-27.

<sup>95</sup> USAAF 1945i. Historical Data, Narrative History Documents of 315th Bombardment Wing, 27.

the 315th BW were assigned to various duties around Northwest Field to keep busy.<sup>96</sup>

The last major achievement of the 315th BW was on 1 November 1945, with the nonstop flight of General Armstrong leading a flight of three Superfortresses over the great circle route from Chitose Airfield in Hokkaido, Japan, to Washington, D.C. This was the first such flight of its kind, and all participating crew members were awarded the Distinguished Flying Cross.<sup>97</sup> November also marked the rapid downsizing of the 315th BW in both personnel and aircraft. Aircraft were ferried back to the United States by flight crews, and other personnel took the slower troop ships back home via Honolulu to San Francisco. By February 1946, the wing had only 3,000 of its former 11,500 members and twenty-four of its aircraft.<sup>98</sup> In January 1946, the wing was redesignated the 315th Composite Wing, and was assigned to the Far East Air Forces and moved to Japan in May 1946. The wing was deactivated on 20 August 1948, and remained inactive until 1951, when it was redesignated the 315 Air Division (Combat Cargo) and activated in Japan on 25 January 1951, with the Far East Air Forces.<sup>99</sup>

## **Northwest Field After World War II**

The 315th BW remained at Northwest Field until 30 May 1946. The 21st Fighter Group, with P-47 and P-51 aircraft, served as part of the air defense force for Guam. The 21st remained at Northwest Field for a brief time from 17 April through 10 October 1946, when it was deactivated. The 23rd Fighter Group (later forming the 23rd Fighter Wing) with P-47s (later designated F-47) replaced the 21st and assumed the air defense role for Guam.<sup>100</sup> As late as 1947, the base had 3,183 airmen. The same year, North Field was home to 6,890 airmen and was operating at reduced strength. North Field was clearly a much larger operation.<sup>101</sup> By 1948, activity at Northwest Field continued to decelerate. In monthly wing histories, discussions

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<sup>96</sup> Gillespie, Samuel S. 1987. *Post-hostility Activities of the 21st Squadron, 501st Bomb Group by Samuel S. Gillespie* in Anthologies of the 315th Bomb Wing (VH) XXI Bomber Command, 20th Air Force, Northwest Field, Guam WWII, Volume 1. Byron Kennedy and Company, St. Petersburg, Florida.

<sup>97</sup> Swann, *A Unit History of the 315th Bomb Wing*, 53.

<sup>98</sup> *Ibid.*, 54.

<sup>99</sup> Maurer, Ed. 1983. *Air Force Combat Units of World War II*. Washington, D.C.: Office of Air Force History, 423.

<sup>100</sup> Okonski, MSGT John. 1985. Personal account of Northwest Field typed by MSgt Okonski. August 1985. Photocopy.

<sup>101</sup> War Department General Staff, Plans and Operations Division. 1947. "War Department Plan for Overseas Bases (Post Occupation Period)." National Archives And Records Administration, College Park, MD, Record Group 107, Entry 215, Box 187-0.

of missions and construction were overshadowed by talk of sports leagues, parties, the mess hall, staffing the library, and other unrelated topics.

A victim of shifting missions, Northwest Field was vacated in the spring of 1949, and units based there were transferred to other stations on the island and in Panama. By February, large areas of the bachelor officers' quarters, civilian quarters, and other housing areas were already vacant. In addition, three of the four base operations buildings were abandoned, and the weather detachment was discontinued. By March, pilots only flew the minimum four hours required for training on the first five days of the month. On the seventh day, the control tower was closed. Eight days later, base operations were concluded, and over the next few weeks the remaining airmen and officers were gone.<sup>102 103 104 105</sup>

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<sup>102</sup> Northwest Field, Base Billeting Office, 1949a. Unit History for the Period of 31 Dec 48 through 31 Jan. 49. February 14, 1949.

<sup>103</sup> Northwest Field, Base Billeting Office, 1949b. Unit History for the Period of 31 Jan. 49 through 28 Feb. 49. March 11, 1949.

<sup>104</sup> Northwest Field, History of Base Operations, 1949a. History of Base Operations 1 January thru 31 January 1949. 14 February, 1949.

<sup>105</sup> Northwest Field, History of Base Operations, 1949b. *History of Base Operations 1 February 1949 to 28 February 1949*. March 7, 1949.

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1945c. Historical Data, Narrative History of Ground Echelon, 331st Bombardment Group, 315th Bombardment Wing, XXI Bomber Command, 20th Air Force, Period: 1 April to 31 May 1945, Northwest Field, Guam, Marianas Islands.

1945d. Historical Data, Narrative History Documents of 24th Air Service Group (315th Wing) XXI Bomber Command Period: 15 April to 31 May 1945.

1945e. Formal Opening Ceremony for Northwest Field, Friday, First of June, Nineteen Hundred and Forty Five, Central Tower, Northwest Field, Guam, Marianas Islands [Program].

1945f. Historical Data, Narrative History Documents of 24th Air Service Group (315th Wing) XXI Bomber Command Period: 1 June to 30 June 1945.

1945g. Historical Data, Narrative History of Ground Echelon, 331st Bombardment Group, 315th Bombardment Wing, XXI Bomber Command, 20th Air Force, Period: 1 June to 30 June 1945, Northwest Field, Guam, Marianas Islands.

1945h. Historical Data, Narrative History of Ground Echelon, 331st Bombardment Group, 315th Bombardment Wing, XXI Bomber Command, 20th Air Force, Period: 1 July to 31 July 1945, Northwest Field, Guam, Marianas Islands.

1945i. Historical Data, Narrative History Documents of 315th Bombardment Wing, XXI Bomber Command, 20th Air Force, Period: 1 July 1945 to 2 September 1945.

1945j. Historical Data, Narrative History Documents of the 16th Bomb Group (VH), 315th Bomb Group VH, Period: 1 August to "VJ" Day.

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n.d. *U.S. Naval Government of Guam*. Corrected Orthography of Guam.

War Department General Staff, Plans and Operations Division

1947. "War Department Plan for Overseas Bases (Post Occupation Period)." National Archives And Records Administration, College Park, MD, Record Group 107, Entry 215, Box 187-0.